

Virology

VOLUME 58

1974

QR
360
V5

EDITORS

George K. Hirst, EDITOR-IN-CHIEF Purnell W. Choppin Robert Haselkorn
W. K. Joklik T. A. Shalla L. Siminovitch
Peter K. Vogt Milton Zaitlin

ASSOCIATE EDITORS

<i>J. G. Atabekov</i>	<i>Allan Granoff</i>	<i>I. R. Schneider</i>
<i>J. B. Bancroft</i>	<i>E. M. J. Jaspars</i>	<i>Maxime Schwartz</i>
<i>J. Michael Bishop</i>	<i>J. M. Kaper</i>	<i>June Rothman Scott</i>
<i>George E. Bruening</i>	<i>Albert S. Kaplan</i>	<i>Jean Semal</i>
<i>John S. Colter</i>	<i>Eduard Kellenberger</i>	<i>Aaron J. Shatkin</i>
<i>Richard W. Compans</i>	<i>Jonathan King</i>	<i>Albert Siegel</i>
<i>Samuel Dales</i>	<i>David W. Kingsbury</i>	<i>Ethan R. Signer</i>
<i>Etienne de Harven</i>	<i>Arnold J. Levine</i>	<i>F. William Studier</i>
<i>G. A. de Zoeten</i>	<i>Leon Levintow</i>	<i>Robert H. Symons</i>
<i>T. O. Diener</i>	<i>Richard M. Lister</i>	<i>Irwin Tessman</i>
<i>Peter Duesberg</i>	<i>Jacob V. Maizel, Jr.</i>	<i>J. H. Tremaine</i>
<i>R. I. B. Francki</i>	<i>Lloyd J. Old</i>	<i>Harold E. Varmus</i>
<i>Fred R. Frankel</i>	<i>Bruce A. Phillips</i>	<i>Jon Weil</i>
<i>E. Peter Geiduschek</i>	<i>Theodore Pincus</i>	<i>Robert Whitcomb</i>
<i>Max Gottesman</i>	<i>Thomas P. Pirone</i>	<i>Norton D. Zinder</i>
	<i>Charles C. Randall</i>	<i>Hans J. Zweerink</i>

ACADEMIC PRESS
New York and London



A Subsidiary of Harcourt Brace Jovanovich, Publishers

Copyright © 1974 by Academic Press, Inc.

ALL RIGHTS RESERVED

No part of this publication may be reproduced or transmitted in any form, or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the copyright owner.

Made in the United States of America

Contents of Volume 58

NUMBER 1, MARCH 1974

JOHN R. STEPHENSON, STEVEN R. TRONICK, AND STUART A. AARONSON. Analysis of Type Specific Antigenic Determinants of Two Structural Polypeptides of Mouse RNA C-Type Viruses.....	1
ELIANE MOHIER, LOTHAIRE PINCK, AND LEON HIRTH. Replication of Alfalfa Mosaic Virus RNAs.....	9
ROBERT M. GOODMAN AND A. FRANK ROSS. Enhancement of Potato Virus X Synthesis in Doubly Infected Tobacco Occurs in Doubly Infected Cells.....	16
PETER HUMPHRIES, ROBERT L. GORDON, DAVID J. McCONNELL, AND PATRICIA CONNOLLY. Endonuclease R. <i>Hind</i> Fragments of T7 DNA.....	25
M. ENGEL RAE AND M. STODOLSKY. Chromosome Breakage, Fusion and Reconstruction During <i>Pldl</i> Transduction.....	32
BERNHARD FLECKENSTEIN AND HANS WOLF. Purification and Properties of <i>Herpesvirus saimiri</i> DNA.....	55
GEORGE J. TODARO, RAOUL E. BENVENISTE, MICHAEL M. LIEBER, AND CHARLES J. SHERR. Characterization of a Type C Virus Released from the Porcine Cell Line PK(15).....	65
J. G. SEEHAFFER AND R. WEIL. Synthesis of Polyoma Virus Structural Polypeptides in Mouse Kidney Cells.....	75
KENNETH R. STONE, RALPH E. SMITH, AND WOLFGANG K. JOKLIK. Changes in Membrane Polypeptides that Occur When Chick Embryo Fibroblasts and NRK Cells are Transformed with Avian Sarcoma Viruses.....	86
J. F. BOL, B. KRAAL, AND F. TH. BREDERODE. Limited Proteolysis of Alfalfa Mosaic Virus: Influence on the Structural and Biological Function of the Coat Protein.....	101
ANNE-MARIE AUBERTIN AND MARIE-ODILE LONCHAMPT. Thymidine Kinase Induction in Frog Virus 3 Infected Mouse Cells.....	111
RENATE KOENIG AND LOUISE GIVORD. Serological Interrelationships in the Turnip Yellow Mosaic Virus Group.....	119
A. J. FARAS, W. E. LEVINSON, J. M. BISHOP, AND H. M. GOODMAN. Identification of a tRNA Nucleotidyltransferase and Its Substrates in Virions of Avian RNA Tumor Viruses.....	126
ANNEMIEKE DINGJAN-VERSTEEGH AND LOUS VAN VLOTEN-DOTING. The Effect of Inhibitors of Protein Biosynthesis on the Infectivity of Alfalfa Mosaic Virus: Role of Coat Protein.....	136
DAVID I. FRIEDMAN AND L. S. BARON. Genetic Characterization of a Bacterial Locus Involved in the Activity of the N Function of Phage λ	141
DAVID E. BRADLEY. The Adsorption of <i>Pseudomonas aeruginosa</i> Pilus-Dependent Bacteriophages to a Host Mutant with Nonretractile Pili.....	149
C. PROPST RICCIUTI AND A. M. HAYWOOD. Production of Defective MS2 Virions in Resting <i>Escherichia coli</i>	164
S. S. LEE AND J. L. SUIT. A Phage P1b Function Needed for DNA Replication in a Lytic Cycle, but Not in the Prophage.....	176

STEPHEN E. FOLLANSBEE, REBECCA W. VANDERSLICE, LLOYD G. CHAVEZ, AND CHARLES D. YEGIAN. A New Set of Adsorption Mutants of Bacteriophage T4D: Identification of a New Gene.....	180
J. G. McDONALD AND ERNEST HIEBERT. Ultrastructure of Cylindrical Inclusions Induced by Viruses of the Potato Y Group as Visualized by Freeze-Etching.....	200
RICHARD ADLER AND DANIEL R. TERSHAK. Temperature-Sensitive Defect of Type 2 Poliovirus.....	209
PRISCILLA A. SCHAFFER, MARY J. TEVETHIA, AND MATILDA BENYESH-MELNICK. Recombination between Temperature-Sensitive Mutants of Herpes Simplex Virus Type 1.....	219
MING-TA HSU AND NORMAN DAVIDSON. Electron Microscope Heteroduplex Study of the Heterogeneity of Mu Phage and Prophage DNA.....	229
M. E. REICHMANN, L. P. VILLARREAL, D. KOHNE, J. LESNAW, AND J. J. HOLLAND. RNA Polymerase Activity and Poly(A) Synthesizing Activity in Defective T Particles of Vesicular Stomatitis Virus.....	240
JOHN E. DAHLBERG. Quantitative Electron Microscopic Analysis of the Penetration of VSV into L Cells.....	250
ROBERT M. GOODMAN AND A. FRANK ROSS. Enhancement by Potato Virus Y of Potato Virus X Synthesis in Doubly Infected Tobacco Depends on the Timing of Invasion by the Viruses.....	263
G. NIGEL GODSON. Evolution of ϕ X174. Isolation of Four New ϕ X-Like Phages and Comparison with ϕ X174.....	272
SHORT COMMUNICATIONS	
R. GRUEN, M. GRAESSMANN, A. GRAESSMANN, AND M. FOGEL. Infection of Human Cells with Polyoma Virus.....	290
JOHN R. STEPHENSON AND STUART A. AARONSON. Temperature-Sensitive Mutants of Murine Leukemia Virus. III. Mutants Defective in Helper Functions for Sarcoma Virus Fixation.....	294
BERGE HAMPAR, JEFFERY G. DERGE, AND STEPHEN D. SHOWALTER. Enhanced Activation of the Repressed Epstein-Barr Viral Genome by Inhibitors of DNA Synthesis.....	298
GERALD COHEN. A Spheroplast Assay for Recombination in Bacteriophage Lambda DNA.....	302
HORST THUROW, HEINER NIEMANN, CLAUS RUDOLPH, AND STEPHAN STIRM. Host Capsule Depolymerase Activity of Bacteriophage Particles Active on <i>Klebsiella</i> K20 and H24 Strains.....	306
K. HANTKE AND V. BRAUN. Fluorescence Studies on First Steps of Phage-Host Interactions.....	310
WILLIAM M. WYATT AND HACHIRO INOKUCHI. Stability of Lambda O and P Replication Functions.....	313
ERRATUM.....	316

NUMBER 2, APRIL 1974

C. SCHOLTISSEK, R. KRUCZINNA, R. ROTT, AND H.-D. KLENK. Characteristics of an Influenza Mutant Temperature-Sensitive for Viral RNA Synthesis.....	317
LESLIE C. LANE. The Components of Barley Stripe Mosaic and Related Viruses.....	323
JOHN BEDBROOK, JUDY DOUGLAS, AND R. E. F. MATTHEWS. Evidence for TYMV-Induced RNA and DNA Synthesis in the Nuclear Fraction from Infected Chinese Cabbage Leaves.....	334
MASAHIDE ISHIBASHI AND JACOB V. MAIZEL, JR. The Polypeptides of Adenovirus. VI. Early and Late Glycopolypeptides.....	345

P. PFEIFFER AND L. HIRTH. Formation of Artificial Top Component from Brome Mosaic Virus at High Salt Concentrations.....	362
KOJI OKAMOTO AND MASUO YUTSUDO. Participation of the <i>s</i> Gene Product of Phage T4 in the Establishment of Resistance to T4 Ghosts.....	369
BEATRIZ G. T. POGO AND SAMUEL DALES. Biogenesis of Poxviruses: Further Evidence for Inhibition of Host and Virus DNA Synthesis by a Component of the Invading Inoculum Particle.....	377
CLIVE DICKSON AND JOHN J. SKEHEL. The Polypeptide Composition of Mouse Mammary Tumor Virus.....	387
P. K. Y. WONG AND J. A. MCCARTER. Studies of Two Temperature-Sensitive Mutants of Moloney Murine Leukemia Virus.....	396
C. MOUCHES, C. BOVE, AND J. M. BOVE. Turnip Yellow Mosaic Virus-RNA Replicase: Partial Purification of the Enzyme from the Solubilized Enzyme-Template Complex.....	409
REX RISSE AND CAREL MULDER. Relative Locations of Rearrangements in the DNA of Defective Simian Virus 40 (SV40).....	424
H. HANAFUSA, T. HANAFUSA, S. KAWAI, AND R. E. LUGINBUHL. Genetic Control of Expression of Endogenous Virus Genes in Chicken Cells.....	439
ERIC HUNTER, ROBERT R. FRIIS, AND PETER K. VOGT. Inhibition of Avian Sarcoma Virus Replication by Glucosamine.....	449
P. MEINDL, G. BODO, P. PALESE, J. SCHULMAN, AND H. TUPPY. Inhibition of Neuraminidase Activity by Derivatives of 2-Deoxy-2,3-dehydro- <i>N</i> -acetylneuraminic Acid.....	457
JAMES F. SHEPARD, GARY A. SECOR, AND D. E. PURCIFULL. Immunochemical Cross-Reactivity Between the Dissociated Capsid Proteins of PVY Group Plant Viruses.....	464
CHARLES E. SAMUEL AND WOLFGANG K. JOKLIK. A Protein Synthesizing System from Interferon-Treated Cells That Discriminates between Cellular and Viral Messenger RNAs.....	476
CHARLES J. SHERR, MICHAEL M. LIEBER, RAOUL E. BENVENISTE, AND GEORGE J. TODARO. Endogenous Baboon Type C Virus (M7): Biochemical and Immunologic Characterization.....	492
DOROTHEA SCANDELLA AND WERNER ARBER. An <i>Escherichia coli</i> Mutant Which Inhibits the Injection of Phage λ DNA.....	504
LOUIS GAZZOLO, M. GIOVANNELLA MOSCOVICI, AND CARLO MOSCOVICI. Replication of Avian Sarcoma Viruses in Chicken Macrophages.....	514
LAWRENCE A. CALIGUIRI. Analysis of RNA Associated with the Poliovirus RNA Replication Complexes.....	526
A. HADIDI. The Nature of the Products of Brome Mosaic Virus RNA Polymerase....	536
JOHN L. WOOLFORD, JR., JAY S. CASHMAN, AND ROBERT E. WEBSTER. f1 Coat Protein Synthesis and Altered Phospholipid Metabolism in f1 Infected <i>Escherichia coli</i>	544
D. E. MAYHEW AND T. W. CARROLL. Barley Stripe Mosaic Virus in the Egg Cell and Egg Sac of Infected Barley.....	561
N. QUINTRELL, H. E. VARMUS, J. M. BISHOP, M. O. NICHOLSON, AND R. M. McALLISTER. Homologies Among the Nucleotide Sequences of the Genomes of C-Type Viruses.....	568
GRETE KELLENBERGER-GUJER, EDOUARD BOY DE LA TOUR, AND DOUGLAS E. BERG. Transfer of the λ dv Plasmid to New Bacterial Hosts.....	576

SHORT COMMUNICATIONS

P. K. SINGH. Isolation and Characterization of a New Virus Infecting the Blue-Green Alga <i>Plectonema boryanum</i>	586
---	-----

G. E. HOUTS, M. GRAVELL, AND ALLAN GRANOFF. Electron Microscopic Observations on Early Events of Frog Virus 3 Replication..... 589

C.-L. SCHENGRUND, R. DUFF, AND A. ROSENBERG. Sialidase Activity of Oncogenic Cells Transformed by Herpes Simplex Virus..... 595

R. G. WEBSTER, R. GOORHA, AND ALLAN GRANOFF. Replication of Influenza Virus in Chick Embryo Fibroblasts After Inhibition of Host Cell Macromolecular Synthesis by Frog Virus 3..... 600

G. CALOTHY AND V. DEFENDI. Replication of a Temperature Sensitive Mutant of Simian Virus 40 in Normal and SV40-Transformed Monkey Cells..... 605

K. HUEBNER AND H. KOPROWSKI. Synthesis of SV40 Capsid Antigen(s) in Heterokaryocytes Formed by Fusion of Nonpermissive with Permissive Cells..... 609

ANNOUNCEMENT..... 612

ERRATUM..... 613

AUTHOR INDEX..... 614

The subject Index for this volume (Volume 58) will appear in the December 1974 issue as part of a cumulative index for *Virology* for the year 1974.